

REMARKS

Revocation of Power of Attorney

Applicant is enclosing herewith a Revocation of Power of Attorney and Appointment of New Attorney naming BRUCE H. TROXELL as attorney of record in this patent application. It is requested that all further correspondence regarding this matter be forwarded to TROXELL LAW OFFICE PLLC at the address listed on the enclosed form. A CHANGE OF ADDRESS FORM is also being submitted herewith.

Claim Rejections

Claims 1-7 are rejected under 35 U.S.C. § 112, second paragraph. Claims 1-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over King et al. (U.S. 5,092,387) in view of Cheng (U.S. 6,379,276).

Drawings

It is noted that the Examiner has accepted the drawings as originally filed with this application.

New Claims

By this Amendment, Applicant has canceled claims 1-7 and has added new claims 8-16 to this application. It is believed that the new claims specifically set forth each element of Applicant's invention in full compliance with 35 U.S.C. § 112, and define subject matter that is patentably distinguishable over the cited prior art, taken individually or in combination.

The new claims are directed toward a take-up drive mechanism for a blind comprising: a drive shaft (14) rotatably located in a head rail (1) of the blind; a worm gear unit (2) located between the drive shaft and a slot tilt rod (13) of the blind; a transmission amplifier (4) located between the drive shaft and the slot tilt rod of the blind; a cut-off block (140) having a slide piece (141) extending outwardly on an exterior thereof, the drive shaft being slidably inserted through the cut-off block; and

a cord retracting reel (15) having: a through hole (151); a plurality of cut-off grooves (152); and an external thread (153), wherein the cut-off block being inserted into the through hole of the cord retracting reel, the slide piece being inserted into the cut-off grooves, the thread having a reel cord of the blind wound thereon to selectively adjust a height of slats of the blind, the cord retracting reel having a rotation controlled by a rotation of the drive shaft.

Other embodiments of the present invention include: the transmission amplifier is located between the worm gear unit and the slot tilt rod of the blind; the transmission amplifier is connected to the worm gear unit at a first end by a coupling drive shaft (20) and at a second end to the drive shaft; the transmission amplifier includes an inner-ring gear (41), the drive shaft includes a central shaft gear (142) engaging and driven by the inner-ring gear; the transmission amplifier includes an inner-ring gear (41) and a plurality of satellite gears (42) engaging the inner ring-gear, the drive shaft includes a central shaft gear (142), the coupling drive shaft including a turn table (43) located on an end thereof and a plurality of shaft pins (44) extending from the turn table, each of the plurality of shaft pins is inserted through one of the plurality of satellite gears, the central shaft gear engaging and being driven by the plurality of satellite gears; the transmission amplifier includes a first gear (45), a second gear (46) engaging and driven by the first gear, a third gear (47) engaging and driven by the second gear, a fourth gear (48) engaging and driven by the third gear, and the drive shaft includes a central shaft gear (142) engaging and driven by the fourth gear; the transmission amplifier includes a first gear (45), a bridging gear (49) engaging and driven by the first gear, and the drive shaft includes a central shaft gear (142) engaging and driven by the bridging gear; the worm gear unit includes a worm gear (21) and a worm (22) connected to the worm gear; and a reversing wing (5) connected at each of two opposing ends to one of two T-cords of the blind.

The primary reference to King et al. teaches et al. discloses a Venetian blind tilt wand connector including a wand (40) connected by a link (20) to a first gear (19), the first gear being connected to a second gear (18), and a blind ladder-tilting drum (17) connected to the second gear (18).

King et al. do not teach a transmission amplifier; a cut-off block having a slide piece extending outwardly on an exterior thereof; the drive shaft being slidably inserted through the cut-off block; a cord retracting reel having a through hole, a plurality of cut-off grooves, and an external thread; the cut-off block being inserted into the through hole of the cord retracting reel; the slide piece being inserted into the cut-off grooves; the thread having a reel cord of the blind wound thereon to selectively adjust a height of slats of the blind; the cord retracting reel having a rotation controlled by a rotation of the drive shaft; the transmission amplifier is located between the worm gear unit and the slot tilt rod of the blind; the transmission amplifier is connected to the worm gear unit at a first end by a coupling drive shaft and at a second end to the drive shaft; nor do King et al. teach a reversing wing connected at each of two opposing ends to one of two T-cords of the blind.

The secondary reference to Cheng utilizes a planetary deceleration mechanism specification to output a torque by means of a motor (41). A first power unit and a second power unit realize achieving hand and electric bi-power operation by means of a worm mechanism actuating an internal gear at a terminal end of a rear side of planetary gear trains. In Fig. 1, Cheng utilizes the same two power units 1 and 2 as bi-power transmission for an input shaft (15). The first power unit actuates a worm gear (14) by means of a motor, which then directly drives the input shaft (15). The second power unit utilizes a motor (21) to actuate a worm gear (24), which is linked to and thereby actuates an internal gear (25) that meshes with planetary gears (32), whereupon bi-power is transmitted to an output shaft (34). Referring to Fig. 1, under normal conditions the first power unit (1) is utilized to directly actuate the output shaft (34), and the motor (21) of the second power unit is at a standstill or enables the internal gear (25) to codirectionally rotate. According to the drawings, to operate the mechanism in reverse direction (not disclosed in patent specification) the motor (21) must be utilized to actuate reverse rotational modulation of the internal gear (25), which thereby enables altering rate of rotation speed of the output shaft (34). Fig. 2 shows a structural sectional view of an application of Fig. 1. Fig. 3 depicts an output shaft of a motor that drives a gear (45) from a side direction and actuates a center sun gear (48). The output shaft effectuates engagement with a first planetary gear train (5), output from which is

converted to an even higher power output by means of a second planetary gear train (6), and the higher power output is then transmitted to a third planetary gear train that rotates within an internal gear (83). A worm (81) similarly actuates the internal gear (83) through a worm gear (82) on an outer end of the internal gear (83). According to the drawings, manually operating the worm (81) ought to modulate angle of tilt of slats to realize shading from incident light.

Cheng does not teach a transmission amplifier located between the drive shaft and the slot tilt rod of the blind; a cut-off block having a slide piece extending outwardly on an exterior thereof; the drive shaft being slidably inserted through the cut-off block; a cord retracting reel having a through hole, a plurality of cut-off grooves, and an external thread; the cut-off block being inserted into the through hole of the cord retracting reel; the slide piece being inserted into the cut-off grooves; the thread having a reel cord of the blind wound thereon to selectively adjust a height of slats of the blind; the cord retracting reel having a rotation controlled by a rotation of the drive shaft; the transmission amplifier is located between the worm gear unit and the slot tilt rod of the blind; the transmission amplifier is connected to the worm gear unit at a first end by a coupling drive shaft and at a second end to the drive shaft; the transmission amplifier includes an inner-ring gear, the drive shaft includes a central shaft gear engaging and driven by the inner-ring gear; the coupling drive shaft including a turn table located on an end thereof and a plurality of shaft pins extending from the turn table, each of the plurality of shaft pins is inserted through one of the plurality of satellite gears; the transmission amplifier includes a first gear, a bridging gear engaging and driven by the first gear, and the drive shaft includes a central shaft gear engaging and driven by the bridging gear; nor does Cheng teach a reversing wing connected at each of two opposing ends to one of two T-cords of the blind.

Even if the teachings of King et al. and Cheng were combined, as suggested by the Examiner, the resultant combination does not suggest: a transmission amplifier located between the drive shaft and the slot tilt rod of the blind; a cut-off block having a slide piece extending outwardly on an exterior thereof; the drive shaft being slidably inserted through the cut-off block; a cord retracting reel having a through hole, a plurality of cut-off grooves, and an external thread; the cut-off block

being inserted into the through hole of the cord retracting reel; the slide piece being inserted into the cut-off grooves; the thread having a reel cord of the blind wound thereon to selectively adjust a height of slats of the blind; the cord retracting reel having a rotation controlled by a rotation of the drive shaft; the transmission amplifier is located between the worm gear unit and the slot tilt rod of the blind; the transmission amplifier is connected to the worm gear unit at a first end by a coupling drive shaft and at a second end to the drive shaft; the transmission amplifier includes an inner-ring gear, the drive shaft includes a central shaft gear engaging and driven by the inner-ring gear; the coupling drive shaft including a turn table located on an end thereof and a plurality of shaft pins extending from the turn table, each of the plurality of shaft pins is inserted through one of the plurality of satellite gears; the transmission amplifier includes a first gear, a bridging gear engaging and driven by the first gear, and the drive shaft includes a central shaft gear engaging and driven by the bridging gear; nor does the combination suggest a reversing wing connected at each of two opposing ends to one of two T-cords of the blind.

It is a basic principle of U.S. patent law that it is improper to arbitrarily pick and choose prior art patents and combine selected portions of the selected patents on the basis of Applicant's disclosure to create a hypothetical combination which allegedly renders a claim obvious, unless there is some direction in the selected prior art patents to combine the selected teachings in a manner so as to negate the patentability of the claimed subject matter. This principle was enunciated over 40 years ago by the Court of Customs and Patent Appeals in In re Rothermel and Waddell, 125 USPQ 328 (CCPA 1960) wherein the court stated, at page 331:

The examiner and the board in rejecting the appealed claims did so by what appears to us to be a piecemeal reconstruction of the prior art patents in the light of appellants' disclosure. ... It is easy now to attribute to this prior art the knowledge which was first made available by appellants and then to assume that it would have been obvious to one having the ordinary skill in the art to make these suggested reconstructions. While such a reconstruction of the art may be an alluring way to rationalize a rejection of the claims, it is not the type of rejection which the statute authorizes.

The same conclusion was later reached by the Court of Appeals for the Federal Circuit in Orthopedic Equipment Company Inc. v. United States, 217 USPQ 193 (Fed.Cir. 1983). In that decision, the court stated, at page 199:

As has been previously explained, the available art shows each of the elements of the claims in suit. Armed with this information, would it then be non-obvious to this person of ordinary skill in the art to coordinate these elements in the same manner as the claims in suit? The difficulty which attaches to all honest attempts to answer this question can be attributed to the strong temptation to rely on hindsight while undertaking this evaluation. It is wrong to use the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit. Monday morning quarterbacking is quite improper when resolving the question of non-obviousness in a court of law.

In In re Geiger, 2 USPQ2d, 1276 (Fed.Cir. 1987) the court stated, at page 1278:

We agree with appellant that the PTO has failed to establish a *prima facie* case of obviousness. Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching suggestion or incentive supporting the combination.

Applicant submits that there is not the slightest suggestion in either King et al. or Cheng that their respective teachings may be combined as suggested by the Examiner. Case law is clear that, absent any such teaching or suggestion in the prior art, such a combination cannot be made under 35 U.S.C. § 103.

Neither King et al. nor Cheng disclose, or suggest a modification of their specifically disclosed structures that would lead one having ordinary skill in the art to arrive at Applicant's claimed structure. Applicant hereby respectfully submits that no combination of the cited prior art renders obvious Applicant's new claims.

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Summary

In view of the foregoing amendments and remarks, Applicant submits that this application is now in condition for allowance and such action is respectfully requested. Should any points remain in issue, which the Examiner feels could best be resolved by either a personal or a telephone interview, it is urged that Applicant's local attorney be contacted at the exchange listed below.

Respectfully submitted,

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By:



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